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REMARKS

Claims 1, 7, and 10 are amended. Claims 2-4, 8, and 9 are canceled without prejudice or disclaimer. Claims 14-20 are withdrawn. Claims 1, 5-7, and 10-13 are pending. No new matter is added by these amendments. Applicant respectfully requests reconsideration and allowance of all claims in view of the amendments above and the remarks that follow.

Restriction Requirement under 35 U.S.C. 121

Pursuant to a telephone conversation between the Examiner and Robert R. Williams on August 15, 2006, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13. Applicant hereby affirms this election and withdraws claims 14-20 from further consideration, but applicant specifically reserves the right to file a divisional application at a later date to reintroduce these claims.

Title

The Office Action requires a new title. The title is amended as required by the Office Action.

Rejections under 35 U.S.C. 112

Claims 4 and 10-13 are rejected under 35 U.S.C. 112 because the claimed "pre-computed result" is used in a different context from that as disclosed at Figure 2, #280 and page 12, lines 17-20, and page 13, lines 17-20. The claims are amended to remove incrementing the pre-computed result.

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Rejections under 35 U.S.C. 102 and 103

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by Vea (U.S. Patent No. 4,924,428). Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(e) as unpatentable over Vorbach (U.S. Patent No. 6,697,979). Claim 5 is rejected under 35 U.S.C 103(a) as unpatentable over Vea in view of Zilka (U.S. PGPub 2003/0061383). Claims 4, 9, 10, 11, and 13 are rejected under 35 U.S.C. 103(a) as unpatentable over Vorbach in view of Kromer (U.S. PGPub 2004/0255099). Claim 12 is rejected under 35 U.S.C. 103(a) as unpatentable over Vorbach in view of Kromer and Zilka.

Applicant respectfully submits that the claims are patentable over the references because the references do not teach or suggest all of the elements in the claims, as further argued below. Claim 1 recites: "if the diagnostic instructions partially complete during the cycles that would be idle, saving an intermediate result and retrieving the intermediate result on a next idle cycle sequence."

Vea does not teach or suggest the intermediate result of claim 1 because the Vea instructions that are performed while the Vea processor is not busy "perform no useful function," as recited by Vea at column 3, lines 9-10. Instructions that perform no useful function have no intermediate result and would have no need to save an intermediate result. Thus, Vea does not teach or suggest "if the diagnostic instructions partially complete during the cycles that would be idle, saving an intermediate result and retrieving the intermediate result on a next idle cycle sequence," as recited in claim 1.

Vorbach does not teach or suggest "saving an intermediate result," as recited in claim 1 because Vorbach at column 5, lines 8-10, recites: "New test data can be loaded until the IDLE cycle is ended by the arrival of new data to be processed." Thus, once the Vorbach IDLE cycle is ended, Vorbach stops loading new test data and does not have any intermediate results to save.

Kromer does not teach or suggest "if the diagnostic instructions partially complete during the cycles that would be idle, saving an intermediate result and retrieving the intermediate result on a next idle cycle sequence," as recited in claim 1 because the

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Kromer instructions at paragraphs [0032] through [0040] relied on by the Office Action
are not diagnostic instructions and are not issued during cycles that would be idle, as
recited in claim 1. Instead the Kromer instructions are a type of instruction that can cause
register dependencies, as described at Kromer paragraph [0027]:

> "Redirect logic circuit 210 detects several types of instructions that would
> ordinarily cause register dependencies, and corrects them by substituting register
> identifiers that provide the correct result."

Zilka does not teach or suggest "if the diagnostic instructions partially complete
during the cycles that would be idle, saving an intermediate result and retrieving the
intermediate result on a next idle cycle sequence," as recited in claim 1, because Zilka
does not perform diagnostic instructions during idle cycles; instead Zilka powers down
the idle circuits, as described at Zilka paragraph [0025] "The power control mechanism
216 of this embodiment can predict which circuits will be idle for a period and can
selectively power down those circuits and units." Thus, Zilka teaches away from "if the
diagnostic instructions partially complete during the cycles that would be idle, saving an
intermediate result and retrieving the intermediate result on a next idle cycle sequence,"
as recited in claim 1.

Thus, the references, alone or in combination, do not teach or suggest "if the
diagnostic instructions partially complete during the cycles that would be idle, saving an
intermediate result and retrieving the intermediate result on a next idle cycle sequence,"
as recited in claim 1

Claims 7 and 10 include similar elements as argued above for claim 1 and are
patentable over the references for similar reasons. Claims 5, 6, and 11-13 are dependent
on claims 1 and 10, respectively, and are patentable for the reasons argued above, plus
the elements in the claims.

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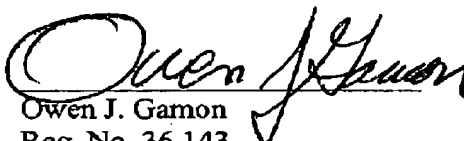10/757,790

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is requested. The Examiner is invited to telephone Applicant's attorney (651-645-7135) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 09-0465.

Respectfully submitted,

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By their Representative,

Date: November 24, 2006

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